

**REMARKS**

Claims 1-9, 13, 15, 18 and 22-23 are currently pending in the present application, following withdrawal of claims 10-12, 14, 16-17, 19-21 and 24-25 from consideration as a consequence of the Restriction/Election Requirement of December 12, 2003.

Claims 1-3, 7, 15, 18 and 23 stand rejected under 35 U.S.C. § 102(b) as anticipated by German patent document DE 1 579 001. Claims 5-6 and 8-9 stand rejected under 35 U.S.C. § 103(a) as unpatentable over this reference. In addition, claim 4 stands rejected under § 103(a) as unpatentable over DE 1 579 001 in view of U.S. Patent No. 5,356,208 to Tadmor ("Tadmor").

Claims 1-9, 13 and 15 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite due to issues of antecedent basis (claim 1), combination of broad and narrow claim language issues (claims 1-9, 13 and 15), and improper method claim recitation (claim 15).

Finally, claims 13 and 22 are noted as being allowable if amended to overcome the pending § 112, second paragraph rejections.

**Response to Pending Rejections and Objections:** The Applicants have carefully reviewed the March 10, 2004 Office Action, and respectfully submit the foregoing amendments and following remarks in response thereto.

The Applicants wish to express their gratitude for the Examiner's indication that claims 13 and 22 contain patentable subject matter. Amendments addressing the pending § 112, second paragraph issues, discussed below, have been made to place these claims into allowable form. Allowance of

claims 13 and 22 is respectfully requested.

Section 112 Issues: Claim 1 has been amended to eliminate the antecedent basis issue by changing “pumping medium” to the previously recited “elastomeric media.” Claims 5-6 and 8 have been amended to delete their respective “preferably” phrases. Claims 7 and 15 have been canceled, without prejudice to the subject matter contained therein. The Applicants respectfully request the pending § 112 rejections be withdrawn.

Rejections Under §§ 102(b), 103(a): The Applicants respectfully traverse the pending § 102(b) and § 103(a) rejections based on DE 1 579 001 on the grounds that this reference does not disclose or suggest all the features of the present invention for which it was cited..

The Applicants have amended claims 1, 18 and 23 to recite that “the screw casing has at least one conical part downstream of a cylindrical part located downstream of a feed opening.” In contrast, DE 1 579 001 discloses a screw casing which is tapered along its entire length.

As discussed at specification paragraph [0007], the DE 1 579 001 configuration controls pressure in the media being processed by withdrawing its screw to allow a portion of the media to be returned up the casing as the gap between the casing and screw increases. The present invention’s screw casing arrangements essentially eliminates such return flow. As the screw is withdrawn, the gap between the screw and the casing does not increase in the cylindrical section of the casing. Thus, rather than controlling pressure in the media being processed, the present invention’s screw and casing arrangements

are directed to providing greatly improved control over the "charging of friction energy into the pumping medium," i.e., improved ability to avoid damaging the media being processed from excessive heat. Application at ¶¶ [0009], [0010].

In view of the DE 1 579 001 reference's failure to disclose or suggest the present invention's screw casing which "has at least one conical part downstream of a cylindrical part located downstream of a feed opening," the pending claims are patentable over this reference under § 102(b) and § 103(a).<sup>1</sup>

Reconsideration and withdrawal of the pending § 102(b) and § 103(a) rejections of claims 1-6, 8-9, 18 and 23 is respectfully requested.

### CONCLUSION

In view of the foregoing amendments and remarks, the Applicants respectfully submit that claims 1-6, 8-9, 13, 18 and 22-23 are patentable over the cited references. Early and favorable consideration and issuance of a Notice of Allowance for these claims is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit

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<sup>1</sup> The remaining cited reference, Tadmor, cited against claim 4 for teaching a double helix, fails to address the deficiencies of DE 1 579 001,. Tadmor fails to teach or suggest the present invention's arrangements of conical and cylindrical casing sections to improve control of energy deposition into the processed medium.

App. Ser. No. 09/819,071  
Atty. Dkt. No.: 658/49678CO  
PATENT

Account No. 05-1323 (Docket #658.49678CO).

July 8, 2004

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